REMARKS

Background

An Office Action dated October 3, 2004 was issued in the above-identified application. Claims 1-27 are pending in this application.

Claims 1, 9 and 11 are currently amended by the present Amendment. Accordingly, claims 1-27 are pending in the Application. Claims 1, 9 and 11 are independent.

Rejection Under 35 USC § 102

Applicants now turn to the rejections under 35 USC § 102.

Alvesteffer

In the Office Action, claims 1-8 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,125,695 to Alvesteffer et al. ("Alvesteffer").

Alvesteffer is directed to a flow meter including a sensor tube with two heaters that are kept at a constant temperature above the ambient temperature. *See* Alvesteffer at Abstract. As fluid flows through the sensor tube, power is supplied to the heaters to maintain their constant temperature. *See* Alvesteffer at Abstract. Using the difference of the power supplied to the first heater and the power supplied to the second heater, a known constant for the fluid, and other measurements, the mass air flow is determined. *See* Alvesteffer at col. 5, ln. 49 to col. 7, ln. 17. Importantly, Alvesteffer does not describe a differential pressure sensor.

Applicants respectfully submit that, claim 1, of the present application, as amended, is patentable over Alvesteffer because Alvesteffer does not disclose each and every element of claim 1. *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

First, claim 1 is directed to a differential pressure sensor. In stark contrast, Alvesteffer describes a flow sensor, and does not describe a differential pressure sensor. Accordingly, applicants respectfully submit that claim 1 of the present application, which recites a differential pressure sensor, is patentable over Alvesteffer for this reason.

Further, claim 1, as amended, of the present application, recites, *inter alia*, memory having stored therein a characteristic of said fluid channeling device, said characteristic comprising at least one fluid channel calibration constant. The flow meter of Alvesteffer includes memory, (*see* Alvesteffer at Figs. 5 and 10), but the memory does not have stored therein a characteristic of a fluid channeling device, the characteristic comprising at least one fluid channel calibration constant. In stark contrast, the memory of the Alvesteffer flow meter comprises instructions which when executed operate the flow meter. *See* Alvesteffer at col. 12, lns. 17-22. Accordingly, because Alvesteffer does not disclose this claimed feature, applicants respectfully submit that claim 1, as amended, is patentable over Alvesteffer.

Furthermore, claim 1, as amended, is patentable over Alvesteffer for additional reasons. For example, the instructions included in the memory of the Alvesteffer flow meter do not include the claimed characteristic of a fluid channeling device, the characteristic comprising at least one fluid channel calibration constant. As the Examiner points out, Alvesteffer does mention a constant, (*see* Alvesteffer at col. 6, lns. 40-42), that may be stored as part of the instructions, but this constant is starkly different than the fluid channel calibration constant recited by Claim 1 of the present application. When determining the Alvesteffer constant, the specific heat (C_P) of the fluid that is being measured is used. *See* Alvesteffer at col. 6, lns 17-27. In contrast, claim 1, as amended, recites storing characteristics of a fluid channeling device. Since the Alvesteffer constant is related to the fluid being measured, and is not in any way

related to characteristics of a fluid channeling device, Alvesteffer also does not disclose this feature of claim 1.

Moreover, as stated above, claim 1 of the present application recites a differential pressure sensor, while Alvesteffer describes a flow sensor. As is know to those of ordinary skill in the art, determinations made by a flow sensor typically do not depend on channel length or channel characteristics (outside the section that is directly involved in the measurement). That is because such a device would typically give the same reading independent of the channel length. As described in the present Specification, with a differential pressure sensor device such as that recited by claim 1, the characteristic of the channeling device can have an effect because it affects the impedance to the flow. As also stated in the specification, the determination of the differential pressure as claimed by claim 1 of the present application is based upon the fluid channeling device characteristic, and is related to the total connecting impedance. The microcontroller is configured to determine a differential pressure based on the level of detected fluid flow, and the characteristic, which is stored in a memory. Accordingly, applicants respectfully submit that claim 1 of the present application is patentable over Alvesteffer for this additional reason.

Accordingly, Applicants respectfully submit that Alvesteffer does not teach, suggest, or provide motivation for all of the features of Claim 1 of the present application, and withdrawal of the rejection is requested.

Dependent claims 2-8 depend either directly or indirectly from claim 1, as amended. Accordingly, applicants respectfully submit that claims 2-8 are distinguishable from Alvesteffer, at least for the reasons stated above with respect to the rejection of claim 1.

Moreover, applicants submit that claims 2-8 are separately patentable over Alvesteffer for additional reasons. For example, applicants respectfully submit that dependant claim 4 should also not be rejected under 35 U.S.C. §102(b) because Alvesteffer does not disclose additional elements recited in claim 4 of the present application. *See Verdegaal*, supra. Claim 4 of the present application recites, *inter alia*, an input hose, an output hose, and a fluid container having an input aperture to which said input hose is coupled and an output aperture to which said output hose is coupled, and wherein a characteristic of said fluid channeling device stored in said memory comprises calibration data for said input hose and said output hose. The flow meter of Alvesteffer does not describe any of these elements, let alone the patentable combination of all three of these claimed elements. The Examiner posits that Fig. 7 of Alvesteffer shows an input hose and an output hose, but applicants respectfully disagree. Fig. 7 illustrates a fluid flow system that is in series with the flow passage. Therefore, the measuring module of Alvesteffer is located inside the main flow passage, and nothing is used to connect the flow meter to the main flow passage. Accordingly, Alvesteffer does not mention hoses in the description of Fig. 7. In addition, other described embodiments of the Alvesteffer flow meter also do not mention the claimed hoses. Fig. 2 of Alvesteffer illustrates a flow meter coupled in parallel to the main flow passage, but this flow meter embodiment also does not illustrate hoses. Instead, the sensor tube, which is made of steel, (*see* Alvesteffer at col. 4, lns. 15-19), is coupled directly into the main flow passage. The description of the Alvesteffer flow meter illustrated in Fig. 2 does not mention hoses. *See* Alvesteffer at col. 4, ln. 9 to col. 7, ln. 17. In turn, since the flow meter of Alvesteffer does not include hoses, the flow meter of Alvesteffer cannot and does not include an input aperture for coupling an input hose, nor an output aperture for coupling an output hose, nor a memory comprising calibration data for any input and output hoses.

Moreover, as discussed above with respect to the rejection to claim 1, because Alvesteffer describes a flow sensor, and not a differential pressure sensor, the determinations made by a flow sensor typically do not depend on channel length or the length of any attached hoses. That is because such a device would typically give the same reading independent of the hose length or characteristics. Accordingly, for this additional reason, applicants respectfully submit that Alvesteffer does not teach, suggest, or provide motivation for all of the features recited by claim 4 of the present application.

With respect to claim 5, applicants respectfully submit that dependant claim 5 is further patentable over Alvesteffer for additional reasons. For example, claim 5 of the present application recites a differential pressure sensor, wherein a characteristic of a fluid channeling device comprises a first constant K_1 and a second constant K_2. As mentioned above, the flow meter of Alvesteffer does not describe fluid channel calibration constants, and thus does not describe their use with a differential pressure sensor.

Accordingly, applicants respectfully submit that, for those further reasons, Alvesteffer does not disclose all of the features of claims 2-8. Applicants further respectfully submit that as set forth above, the inventions recited by those claims are patentably distinguishable over Alvesteffer, as Alvesteffer fails to teach, suggest or provide motivation for the above-discussed elements recited by those claims. *See Verdegaal*, supra. Accordingly, applicants respectfully request withdrawal of the rejection of those claims.

Fauqué

In the Office Action, claims 9-10 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,220,080 to Fauqué ("Fauqué").

Fauqué is directed to a method and system for measuring the geometrical parameters of ultra-thin wafers. *See* Fauqué at col. 2, lns. 30-33. The measurement system comprises two measurement channels, each comprising a capacitive sensor and back pressure sensor. *See* Fauqué at Abstract. The back pressure sensor is used to calibrate the capacitive sensor for a given dielectric permittivity of a conductive target, and the capacitive sensor is used to measure the thickness of the wafer. *See* Fauqué at Abstract. Importantly, Fauqué does not describe a differential pressure sensor, nor a method calibrating a differential pressure sensor.

Applicants respectfully submit that claim 9, as amended, of the present application, is patentable over Fauqué, because Fauqué does not disclose each and every element of claim 9, as amended, of the present application. *See Verdegaal*, supra. Claim 9, as amended, of the present application recites, *inter alia*, 1) coupling a pressure sensor to be calibrated to a calibration system and controller, said pressure sensor comprising a fluid channeling device that comprises an input hose and an output hose, and 2) writing a constant in a memory of the pressure sensor to be calibrated, wherein a characteristic of said fluid channeling device stored in said memory comprises calibration data for said input hose and said output hose.

First, Fauqué describes a capacitive based dimensional gauge, and is not concerned with, and does not describe, the calibration of a differential pressure sensor as recited by claim 9 of the present application. Accordingly, applicants submit that it is technically improper to use Fauqué as a basis for this rejection of claim 9 of the present application.

Further, claim 9 recites coupling a pressure sensor to be calibrated to a calibration system and controller, said pressure sensor comprising a fluid channeling device that comprises an input hose and an output hose. In stark contrast, Fauqué does not describe hoses as part of a measuring

system. *See* Fauqué at Figs. 1 and 2. Therefore Fauqué also does not describe this feature as recited in claim 9.

In addition, claim 9 also recites writing a constant in a memory of the pressure sensor to be calibrated, wherein a characteristic of said fluid channeling device stored in said memory comprises calibration data for said input hose and said output hose. Because the measuring system of Fauqué does not include hoses, any memory that is a part of the Fauqué system cannot and does not include calibration data for any hoses. For this additional reason, Fauqué does not disclose all the features of claim 9.

Dependent claim 10 depends directly from claim 9, as amended. Accordingly, applicants respectfully submit that claim 10 is distinguishable from Fauqué, at least for the reasons stated above with respect to the rejection of claim 9.

Accordingly, applicants respectfully submit that Fauqué does not disclose all of the features of claims 9-10. Applicants further respectfully submit that as set forth above, the inventions recited by those claims are patentably distinguishable over Fauqué , as Fauqué fails to teach or suggest the above-discussed elements recited by those claims. *See Verdegaal*, supra. Accordingly, applicants respectfully request withdrawal of the rejection of those claims. Early notification of allowance is respectfully requested.

Nishimura

In the Office Action, claims 11-27 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,264,961 to Nishimura ("Nishimura").

Nishimura is directed to an apparatus for measuring the flow rate of suction air in an internal combustion engine. *See*, e.g., Nishimura at abstract. The flow rate, along with other measurements, are processed by a control unit to create control signals for a fuel injector and an

ignition coil. *See* Nishimura at col. 4, lns. 25-38. Importantly, Nishimura does not describe the use of a differential pressure sensor in an enclosure for the control of an air flow.

Applicants respectfully submit that, claim 11, as amended, of the present application is patentable over Nishimura because Nishimura does not disclose each and every element of claim 11, as amended, of the present application. *See Verdegaal,* supra. Claim 11, as amended, of the present application recites, *inter alia*, 1) memory having stored therein a characteristic of an air channeling device, said characteristic comprising at least one air channel calibration constant, and 2) a first differential pressure sensor controlling an supply air system to maintain a predetermined air flow in an enclosure.

Claim 11 further recites memory having stored therein a characteristic of an air channeling device, said characteristic comprising at least one air channel calibration constant. The flow meter of Nishimura includes memory, (*see* Nishimura at Fig. 2), nos. 207, 209, more specifically RAM and ROM, but the memory does not have stored therein a characteristic of an air channeling device, the characteristic comprising at least one air channel calibration constant. Instead, the RAM of the Nishimura flow meter comprises a calibration coefficient, voltage, differential pressure and temperature readings, (*see* Nishimura at col. 4, ln. 38-40 and col. 6 lns. 55-59), while the ROM of the Nishimura flow meter comprises control programs and fixed data comprising a predetermined reference pressure. *See* Nishimura at col. 6, lns. 29-30. Since Nishimura does not disclose memory having stored therein a characteristic of an air channeling device, the characteristic comprising at least one air channel calibration constant, Nishimura does not disclose all the features of claim 1.

Furthermore, the calibration coefficient stored in the RAM of the Nishimura flow meter is starkly different from the claims as an air channel calibration constant. In Nishimura, when

determining the calibration coefficient, K, the surface area of the of a hot wire (S) is included in the equation. *See* Nishimura at col. 4, ln. 54 to col. 5 ln. 8. In contrast, claim 11, as amended, recites storing characteristics of an air channeling device. Since the coefficient described in Nishimura is related to the surface area of the of a hot wire, and not related to an air channeling device, Nishimura does not disclose all the features of claim 11.

Additionally, claim 11 recites a first differential pressure sensor controlling an supply air system to maintain a predetermined air flow in an enclosure. The Examiner posits that the control unit of Nishimura discloses this element of claim 11, but applicants respectfully disagree. In Nishimura, flow rate is measured to create control signals for a fuel injector and an ignition coil. *See* Nishimura at col. 4, lns. 25-38. Nishimura does not describe the use of a differential pressure sensor to maintain a predetermined air flow in an enclosure, as recited by claim 11 of the present application. The air flow into an internal combustion engine is regulated by the amount a driver presses the accelerator. Therefore, Nishimura does not disclose a first differential pressure sensor controlling an supply air system to maintain a predetermined air flow in an enclosure, as recited in claim 11.

Dependent claims 12-27 depend either directly or indirectly from claim 11, as amended. Accordingly, applicants respectfully submit that claims 12-27 are distinguishable from Nishimura, at least for the reasons stated above with respect to the rejection of claim 11.

Moreover, applicants respectfully submit that claims 12-27 are also patentable over Nishimura for addition reasons. For example, applicants respectfully submit that dependant claim 14 is further patentable over Nishimura because Nishimura does not describe additional elements recited in claim 14 of the present application. *See Verdegaal*, supra. Claim 14 of the present application recites, *inter alia*, an input hose, an output hose, and a fluid container having

an input aperture to which said input hose is coupled and an output aperture to which said output hose is coupled, and wherein a characteristic of said fluid channeling device stored in said memory comprises calibration data for said input hose and said output hose. Nishimura does not describe even one of these elements, let alone the inventive combination of all of these elements. The Examiner posits that Fig. 5 of Nishimura shows an input hose and an output hose, but applicants respectfully disagree. Fig. 5 illustrates a hot wire and a differential pressure sensor "disposed in ... bypass passage[s] formed in the main venture chamber body." *See* Nishimura at col. 8, ln. 64 to col. 9, ln. In Nishimura, the bypass passages are formed in the main body, and thus no hoses are taught, described or suggested. In addition, the description of the first flow meter embodiment described in Nishimura does not mention hoses. *See* Nishimura at col. 3, ln. 19-62. Additionally, since the flow meter of Nishimura does not include hoses, the flow meter of Nishimura cannot and does not include any input aperture for coupling an input hose, an output aperture for coupling an output hose, or memory comprising calibration data for the input and output hoses. Therefore applicants respectfully submit that Nishimura does not disclose all the features of claim 14.

With respect to claim 15, applicants respectfully submit that dependant claim 15 is further patentable over Nishimura because Nishimura does not disclose additional elements recited in claim 15 of the present application. *See Verdegaal*, supra. Claim 15 of the present application recites, a differential pressure sensor, wherein a characteristic of a fluid channeling device comprises a first constant K_1 and a second constant K_2. As mentioned above, Nishimura does not describe a differential pressure sensor as recited by claim 15. Further, the flow meter of Nishimura does not describe, suggest or provide motivation for fluid channel calibration constants. Accordingly, Nishimura does not disclose all of the elements of claim 15.

Applicants respectfully submit that dependant claim 19 is also patentable over Nishimura because Nishimura does not disclose additional elements recited in claim 19 of the present application. *See Verdegaal*, supra. Claim 19 of the present application recites, *inter alia*, an exhaust air system coupled to a chamber for providing air flow out of the chamber. Nishimura is directed to use with an internal combustion engine. Therefore Fig. 1 illustrates an air intake system. As illustrated in figure 1 after the inputted air is mixed with fuel, the air/fuel mixture is sent to the engine. Importantly, Nishimura does not disclose an exhaust air system coupled to the chamber for providing air flow out of a chamber, as recited in claim 19.

Dependent claims 20-27 depend either directly or indirectly from claim 19. Accordingly, applicants respectfully submit that claims 20-27 are distinguishable from Nishimura, at least for the additional reasons stated above with respect to the rejection of claim 19.

Applicants respectfully submit that dependant claim 20 is patentable over Nishimura because Nishimura does not disclose additional elements recited in claim 20 of the present application. *See Verdegaal*, supra. Claim 20 of the present application recites, a second differential pressure sensor coupled to an exhaust air system. As mentioned earlier, Nishimura does not describe an exhaust air system. Therefore because Nishimura does not describe and air exhaust system, Nishimura cannot disclose a second differential pressure sensor coupled to an exhaust air system, as recited in claim 20.

Dependent claims 21-27 depend either directly or indirectly from claim 20. Accordingly, applicants respectfully submit that claims 21-27 are distinguishable from Nishimura, at least for the additional reason stated above with respect to the rejection of claim 20.

Accordingly, applicants respectfully submit that Nishimura does not disclose all of the features of claims 11-27. Applicants further respectfully submit that as set forth above, the

inventions recited by those claims are patentably distinguishable over Nishimura , as Nishimura fails to teach or suggest or provide motivation for the above-discussed elements recited by those claims. Accordingly, applicants respectfully request withdrawal of the rejection of those claims. Early notification of allowance is respectfully requested.

Conclusion

Accordingly, applicants submit that all of the claims in the application (i.e., 1-27) are in condition for allowance. Applicants respectfully request entry of this Amendment, and early and favorable action in the above-identified application.

Any fees or charges required in connection with the present application may be charged to Deposit Account No. 19-4709.

Respectfully submitted,

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